

1960

Dredging correspondence

Cal R. Fremling
Winona State University

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Cal

1:25 PM
Friday

he's sending materials

Aug Harris

Min DNR

612-297-4219

Returning your call.
Your call ^{to DNR ofc.} was referred
to him

Re: Wetland Improvement
v Irrigation

Ellen Fuge mil!

612-297-3763

purple loose stripe
coordinator

Legislative Commission on Minnesota Resources

100 CONSTITUTION AVENUE / ROOM 65 / STATE OFFICE BUILDING • ST. PAUL, MINNESOTA 55155 • (612) 296-2406

JOHN R. VELIN
Director



July 10, 1989

*Asst. to
Velin
David Flipp*

Talked with [unclear] on Dec 15

Mr. Joe Alexander, Commissioner
Department of Natural Resources
500 Lafayette Road
St. Paul, Minnesota 55155

Dear Commissioner Alexander:

The Legislative Commission on Minnesota Resources (LCMR)
on July 10, 1989, reviewed and recommended approval of the
following work programs:

M.L. 89, Chapter 335, Sec. 29, Subd. 3

(a) Acquisition of Private Exploration Data	\$150,000
(b) St. Louis County Tract Index	80,000
(c) Ground Water Sensitivity	724,000
(d) River Bank & Meander Management	200,000
(g) Impacts of Forest Road Systems	170,000
(j) American Youth Hostel Pilot Program	260,000
(p) Mississippi River Interpretive Ctr. Planning	60,000
(q) <u>Urban Fishing Program</u>	<u>350,000</u> ?

We wish you success with these and other programs of
mutual interest.

Sincerely,

John R. Velin

John R. Velin,
Director, LCMR

By direction of:
Rep. Doug Carlson, Secretary

cc: Sen. G. Merriam, Chair Senate Finance
Rep. G. Anderson, Chair House Appropriations
Doug Watnemo, Comptroller
Program Managers
Bill Becker, DNR

*RFP for next biennium
deadline Feb 16
marsh creation would be unique*

Printed on Recycled Paper

*Fishing experience
and result
monitoring - how do it
wetland*



U.S. FISH AND WILDLIFE SERVICE
INTER-OFFICE TRANSMITTAL

30930

<input type="checkbox"/> Director, _____	<input type="checkbox"/> Regular Mail
<input type="checkbox"/> Regional Director, _____	<input type="checkbox"/> Air Mail
<input type="checkbox"/> Project Leader, _____	<input type="checkbox"/> Action
<input checked="" type="checkbox"/> Cal Fremling	<input checked="" type="checkbox"/> Information
From Gare Hunt	Office Montezuma WWR
	Date 21 Feb., 1990

My apologies for tardiness -- I don't know where the past two weeks went; I would only hope they were one-fourth as productive as they were quick. Alas, however -- not so...

Cal, the materials in the folder are getting a little dated. I'm sure you've seen the Field Research 2 publication. If not, do so. Good life history. The final write-up of our cutting work is included. Bob Clay (D.U. Canada) did a good historical job. There are some errors (due to misunderstanding) regarding work @ Montezuma. Call it any question.

I believe you have a good to excellent chance of "managing" P. L. in your lake - Management is the operative term (in my opinion) -- you have it, so you incorporate it into the first 2-3 years of plant succession and phase it out for several years. So long as you have 12" of H₂O control potential, and good access, I can't see how your efforts can go too far off course. The work w/ Japanese millet (or similar species), along w/ good seed bed prep. and reed canary grass, should prove valuable allies.

Good luck -- come visit if possible this summer. We'll go over historic aerial photos of marsh & also tour by airboat.

Regards, Gare



STATE OF
MINNESOTA
DEPARTMENT OF NATURAL RESOURCES



DNR INFORMATION
(612) 296-6157

500 LAFAYETTE ROAD • ST. PAUL, MINNESOTA • 55155-40_____

Dec. 20, 1989

Dr. Calvin Fremling
Pasteur Hall
Winona State University
Winona, Minnesota 55987

Dear Dr. Fremling:

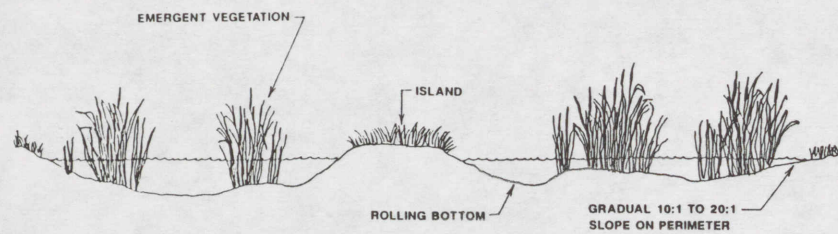
Enclosed is some information on wetland enhancement and construction, as we discussed on the telephone. As it turns out, we do not have as much written material on the subject as I anticipated. However, I hope you will find this information useful. Again, I would encourage you to call on Nick Gulden, Area Wildlife Manager for assistance.

Sincerely,

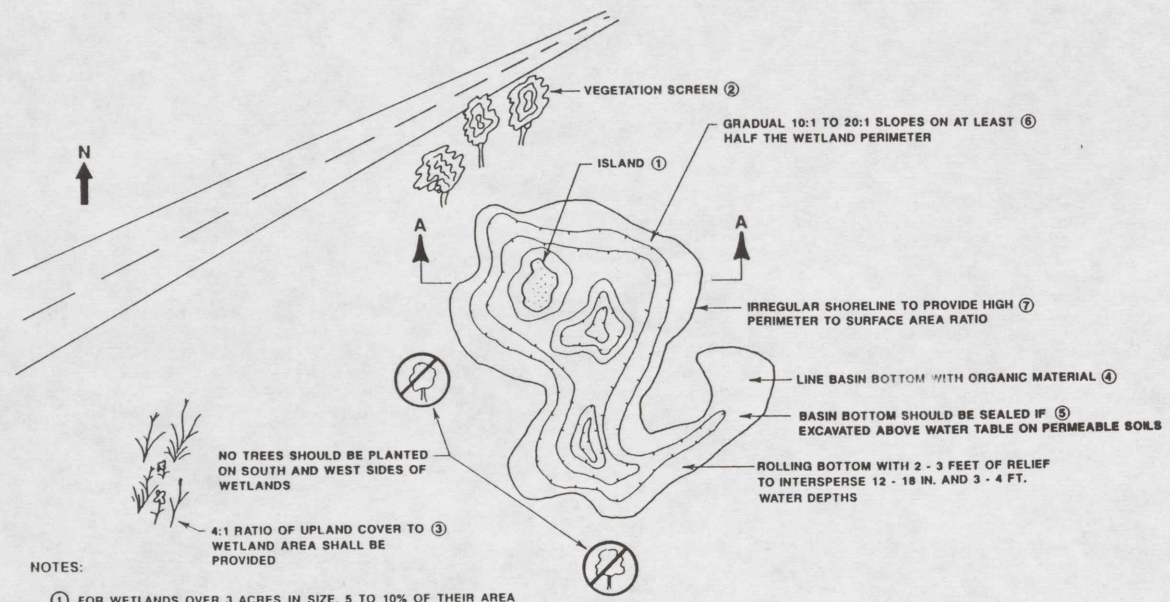
Douglas J. Norris
Wildlife Specialist
Ecological Services

Enclosures (4)

cc: Nick Gulden



SECTION A - A
WETLAND



NOTES:

- FOR WETLANDS OVER 3 ACRES IN SIZE, 5 TO 10% OF THEIR AREA SHOULD BE ISLANDS. ISLANDS SHOULD BE LOCATED 100 TO 300+ FEET FROM SHORE AND SHOULD BE AT LEAST 200 SQUARE FEET IN SIZE.
- FOR WETLANDS NEAR HIGH VOLUME HIGHWAYS, VEGETATION SCREENS SHOULD BE ESTABLISHED TO REDUCE WILDLIFE DISTURBANCE CAUSED BY TRAFFIC. VEGETATION SCREENS SHOULD BE COMPRISED OF TREES SUCH AS ASH, SPRUCE, WILLOW, OR COTTONWOOD AND SHRUBS SUCH AS PLUM, VIBURNUM, CHOKECHERRY, OR DOGWOOD.
- UPLAND HERBACEOUS VEGETATION SHOULD CONSIST OF TALL WARM-SEASON GRASSES SUCH AS SWITCHGRASS, BIG BLUESTEM AND INDIANGRASS. SEEDING MIXTURES SHOULD INCLUDE A NURSE CROP FOR EROSION CONTROL. SEEDING RATES SHOULD BE DETERMINED IN CONSULTATION WITH THE ENVIRONMENTAL SERVICES SECTION.
- ORGANIC MATERIAL SHOULD CONSIST OF TRANSLOCATED WETLAND MUCK OR HAY.
- BOTTOM SEAL SHOULD BE COMPRISED OF SOILS CONTAINING AT LEAST 40% CLAY. SOILS CONTAINING LESS THAN 40% CLAY MAY BE USED BUT MUST BE COMPACTED. AMOUNT AND RATE OF COMPACTION SHOULD BE DETERMINED BY THE PROJECT ENGINEER.
- GRADUAL SLOPES SHOULD BE USED TO ENCOURAGE GROWTH OF AQUATIC EMERGENT VEGETATION AND THE FORMATION OF MUD FLATS TO PROVIDE SHORE BIRD HABITAT AND WATERFOWL LOAFING SITES.
- IRREGULAR SHORELINES SHOULD BE USED TO PROVIDE VISUAL ISOLATION, THUS INCREASING THE NUMBER OF WILDLIFE TERRITORIES PER UNIT AREA.

PLAN VIEW
WETLAND

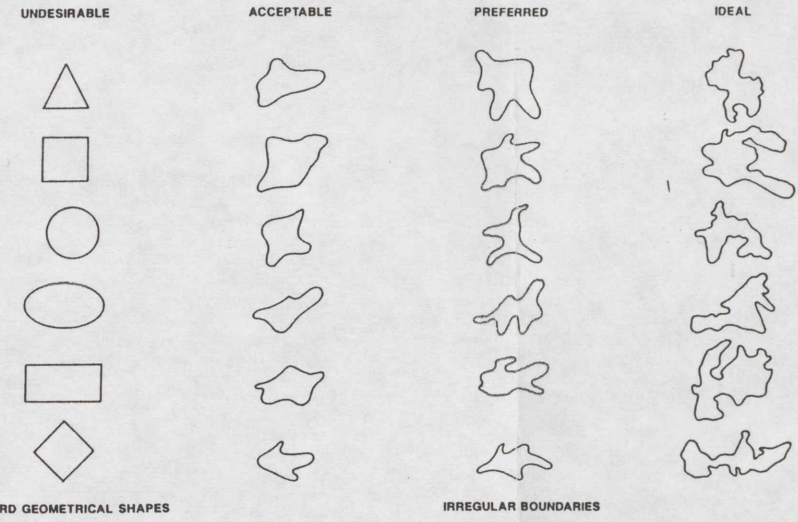
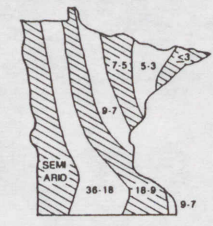
ADDITIONAL NOTES:

- CONSIDER DESIGNING SMALL BASINS 1 - 2 FEET DEEPER THAN DESIRED. INCLUDE 10% OF AREA \geq 6 FT. DEEP TO ALLOW FOR SILTATION AND TO MAINTAIN OPEN WATER DURING DROUGHT.
- WETLANDS SHOULD BE AT LEAST 0.5 ACRES IN SIZE BUT PREFERENCE IS FOR WETLANDS \geq 1.0 ACRE IN SIZE.
- THE EXCAVATED MATERIAL SHOULD BE USED TO CONSTRUCT ISLANDS, BUILD WATER CONTROL LEVEES, SPREAD OVER SURROUNDING UPLAND.

WETLAND DEPTH DESIGN GUIDE		
WETLAND AREA (%)	WATER DEPTH* (FT)	HABITAT CREATED
25	0.5 - 1.5	Mud Flat /Emergents
25	1.5 - 3.0	Emergent Vegetation
30 - 50	3.0 - 5.0	Open Water
0 - 10	> 2	Open Water
0 - 10	Islands	Nesting Cover

* Water depth represents full pool and assumes normal depth will fluctuate 1 foot below this.

MINIMUM WATERSHED ACREAGE REQUIRED PER ACRE OF IMPOUNDMENT TO SUSTAIN NORMAL POOL LEVEL



WETLAND SHAPES

DEFINING WETLANDS

WETLANDS ARE AREAS WITH HYDRIC SOIL THAT USUALLY SUPPORT HYDROPHYTIC VEGETATION AND HAVE A HIGH WATER TABLE THAT IS AT OR NEAR THE SURFACE, TYPICALLY FOR A WEEK OR MORE DURING THE GROWING SEASON.

WETLAND TYPES

TYPE	DESCRIPTION
1	SEASONALLY FLOODED BASIN OR FLAT: SOIL IS COVERED WITH WATER OR WATERLOGGED FOR SHORT PERIODS OF TIME.
2	FRESH MEADOW: SOIL IS WATERLOGGED WITHIN A FEW INCHES OF THE SURFACE; USUALLY SUPPORTS GRASSES OR SEDGES.
3	SHALLOW FRESH MARSH: SOIL IS OFTEN COVERED WITH \leq 8 INCHES OF WATER; SUPPORTS CATTAILS OR SIMILAR WETLAND VEGETATION.
4	DEEP FRESH MARSH: COMMONLY HAS CATTAILS, BUT 50 - 85% OF THE SURFACE AREA IS OPEN WATER.
5	INLAND FRESH OPEN WATER: WATER, USUALLY < 10 FEET DEEP AND FRINGED BY EMERGENT VEGETATION, COVERS > 85% OF THE SURFACE AREA.
6	SHRUB SWAMP: LOWLAND SHRUB COMMONLY DOMINATED BY ALDER, WILLOW, OR DOGWOOD.
7	WOODED SWAMP: LOWLAND FOREST USUALLY DOMINATED BY BLACK SPRUCE, TAMARACK, BLACK ASH, WHITE CEDAR, OR RED MAPLE.
8	BOG: VEGETATION FORMS A SPONGY MAT COMMONLY DOMINATED BY MOSSES, HEATH SHRUBS, AND SEDGES.

WETLAND LOSSES

A U.S. Fish & Wildlife Service report estimated Minnesota's original wetland acreage at 18.4 million. Of these, about 9.7 million acres (53%) have been lost or destroyed. In the agricultural zone of Minnesota, approximately 72% of the wetlands have been lost or converted to other uses.

WETLAND FUNCTIONS

- WATER QUALITY: WETLAND PLANTS ABSORB POLLUTANTS AND FILTER SEDIMENT FROM STORMWATER AND RUNOFF.
- SCENIC VALUE: PRIMEVAL SPRUCE BOGS, PRAIRIE MARSHES, AND OTHER UNDEVELOPED WETLANDS ARE DRAWING CARDS FOR MINNESOTA TOURISM. THEY SYMBOLIZE THE NATURAL SOLITUDE PEOPLE SEEK FOR WILDERNESS WEEKEND RETREATS.
- FLOOD CONTROL: WETLAND BASINS AND VEGETATION REDUCE THE HEIGHT OF FLOOD WATERS BY SLOWING THE FLOW OF RUNOFF.
- GROUNDWATER RECHARGE: THE SLOWING OF RUNOFF INCREASES INFILTRATION TO THE UNDERGROUND WATER SUPPLIES THAT MANY COMMUNITIES DEPEND UPON.
- WILDLIFE HABITAT: WETLANDS SUPPORT MORE THAN DUCKS. APPROXIMATELY 135 SPECIES OF MINNESOTA BIRDS, MAMMALS, REPTILES, AND AMPHIBIANS RELY ON WETLANDS DURING SOME PART OF THEIR LIFE CYCLE.

Mn/DOT



CONSTRUCTION GUIDELINES FOR
WETLAND MITIGATION PONDS

THIS PLATE IS INTENDED AS A GENERAL GUIDE. FEATURES CONTAINED HEREIN MAY NEED TO BE ESTIMATED ON A SITE-SPECIFIC BASIS OR TAILORED TO THE LOCAL ENVIRONMENT. CONSULT ENVIRONMENTAL SERVICES FOR DETAILED SPECIFICATIONS OR ASSISTANCE.

Draft 1 12-1-89

INTER-DEPARTMENT MEMORANDUM

DEPARTMENT: Public Works

TO: Eric Sorensen, City Manager

DATE: September 6, 1988

FROM: Robert J. Bollant, Director of Public Works

SUBJECT: Proposed Dredging of Lake Winona Informational Meeting

The informational meeting scheduled for September 6, 1988, on the dredging of Lake Winona had to be postponed due to the heavy schedule of the area legislators.

The Lake Winona Committee met with the City Manager and Director of Public Works during the time scheduled for the Lake Winona Meeting on September 6.

The Lake Winona Committee requested the following:

1. A meeting with the Port Authority to request placing four feet of silt on top of the sand fill in Riverbend. This proposed meeting is scheduled for September 28, 1988.
2. The first meeting with the Regulatory Agencies (Corps of Engineers, DNR, PCA and Fish and Wildlife) be without State and U.S. Politicians those invited would be:
 - a) Regulatory Agency Staff
 - b) Lake Winona Committee
 - c) City Council
 - d) Port Authority
 - e) City Administration
 - f) Press


The time and agenda of this meeting would be:

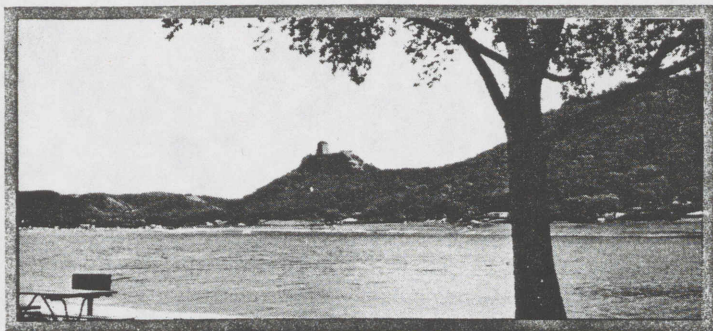
Date: Wednesday, October 5, 1988, 10:00 a.m. - Green Room

Agenda:

1. Introductions
2. Forty-five minute presentation by Dr. Cal Fremling on the History of the Lake Winona Reclamation Project with slides.
3. Presentation by Director of Public Works on Proposed Dredging of Lake Winona as outlined in the July 18, 1988, Feasibility Report. This will include dredging both the East and West Lake with emphasis on Priority #1, the Dredging of the East Lake. An explanation will be presented on Riverbend no longer being a wet land since it is protected with a permanent dike.
4. Catered lunch at Jaycee Pavilion, weather permitting, City Hall Green Room with inclement weather.
5. Field trip to Riverbend Industrial Park, proposed disposal site for East Lake Dredging.
6. Regulatory Agency Staff comments. The meeting should be concluded by 3:00 p.m. at the latest.

Sincerely,


Robert J. Bollant
Director of Public Works



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



August 15, 1988

The Honorable David Durenberger
United States Senate
154 Russell Building
Washington, D.C. 20510

Dear Senator Durenberger:

Previously you received an invitation to attend a meeting in Winona regarding the dredging of Lake Winona. Based upon meeting schedules, the discussion is set for 1:00 p.m. on Tuesday, September 6, 1988, at City Hall.

We appreciate you or your staff's participation in this matter with various State of Minnesota and federal agencies. With your help we intend to have a dredging project that meets environmental concerns.

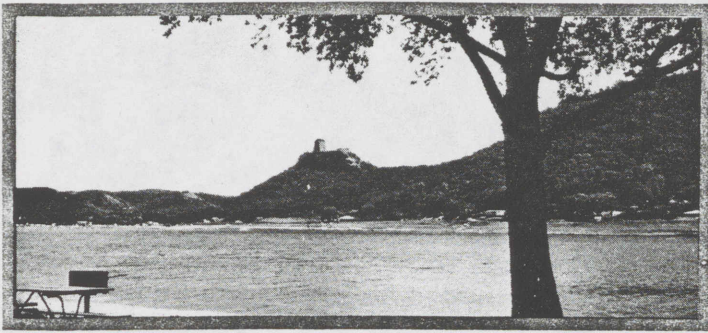
We believe our project to be environmentally sound and a resolution to an issue that is important to our citizens.

Sincerely,

Eric B. Sorensen
City Manager

EBS:df

c: Mayor and Council
✓ Lake Winona Committee
Bob Bollant, Public Works Director



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



August 15, 1988

The Honorable Rudy Boschwitz
United States Senate
505 Hart Building
Washington, D.C. 20510

Dear Senator Boschwitz:

Previously you received an invitation to attend a meeting in Winona regarding the dredging of Lake Winona. Based upon meeting schedules, the discussion is set for 1:00 p.m. on Tuesday, September 6, 1988, at City Hall.

We appreciate you or your staff's participation in this matter with various State of Minnesota and federal agencies. With your help we intend to have a dredging project that meets environmental concerns.

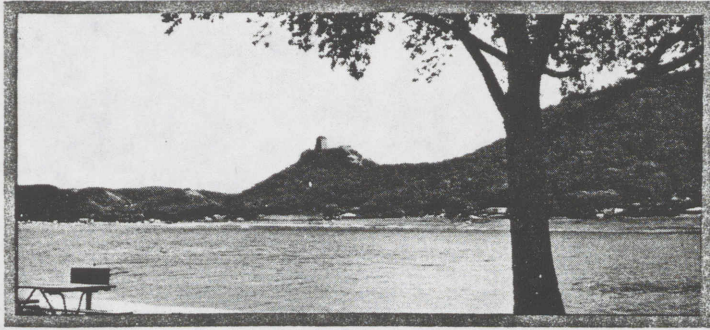
We believe our project to be environmentally sound and a resolution to an issue that is important to our citizens.

Sincerely,

Eric B. Sorensen
City Manager

EBS:df

c: Mayor and Council
Lake Winona Committee
Bob Bollant, Public Works Director



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



August 15, 1988

The Honorable Tim Penny
House of Representatives
436 Cannon House Office Bldg.
Washington, D.C. 20515

Dear Mr. Penny:

Previously you received an invitation to attend a meeting in Winona regarding the dredging of Lake Winona. Based upon meeting schedules, the discussion is set for 1:00 p.m. on Tuesday, September 6, 1988, at City Hall.

We appreciate you or your staff's participation in this matter with various State of Minnesota and federal agencies. With your help we intend to have a dredging project that meets environmental concerns.

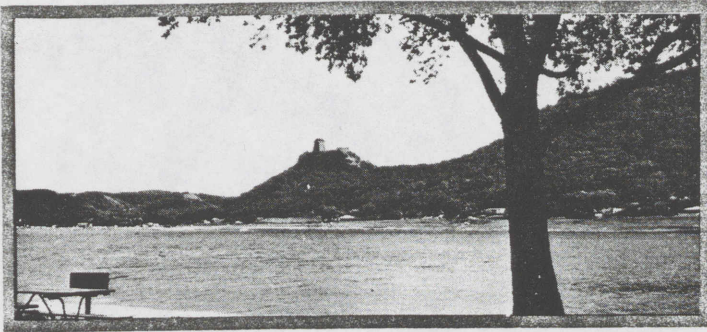
We believe our project to be environmentally sound and a resolution to an issue that is important to our citizens.

Sincerely,

Eric B. Sorensen
City Manager

EBS:df

c: Mayor and Council
Lake Winona Committee
Bob Bollant, Public Works Director



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



August 15, 1988

The Honorable Steve Morse
Room G-24, Capitol Building
St. Paul, MN 55155

Dear Senator Morse:

Previously you received an invitation to attend a meeting in Winona regarding the dredging of Lake Winona. Based upon meeting schedules, the discussion is set for 1:00 p.m. on Tuesday, September 6, 1988, at City Hall.

We appreciate you or your staff's participation in this matter with various State of Minnesota and federal agencies. With your help we intend to have a dredging project that meets environmental concerns.

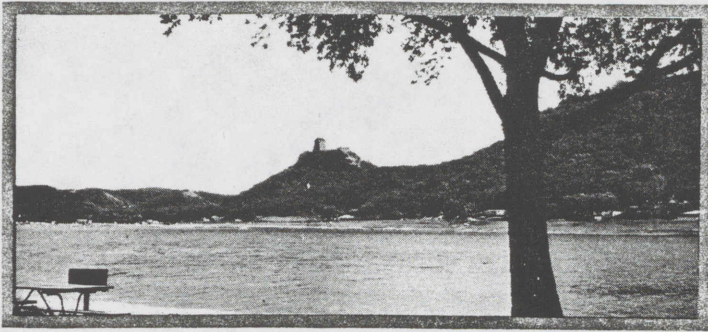
We believe our project to be environmentally sound and a resolution to an issue that is important to our citizens.

Sincerely,

Eric B. Sorensen
City Manager

EBS:df

c: Mayor and Council
Lake Winona Committee
Bob Bollant, Public Works Director



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



August 15, 1988

The Honorable Virgil Johnson
Room 207
State Office Building
St. Paul, Minnesota 55155

Dear Mr. Johnson:

Previously you received an invitation to attend a meeting in Winona regarding the dredging of Lake Winona. Based upon meeting schedules, the discussion is set for 1:00 p.m. on Tuesday, September 6, 1988, at City Hall.

We appreciate you or your staff's participation in this matter with various State of Minnesota and federal agencies. With your help we intend to have a dredging project that meets environmental concerns.

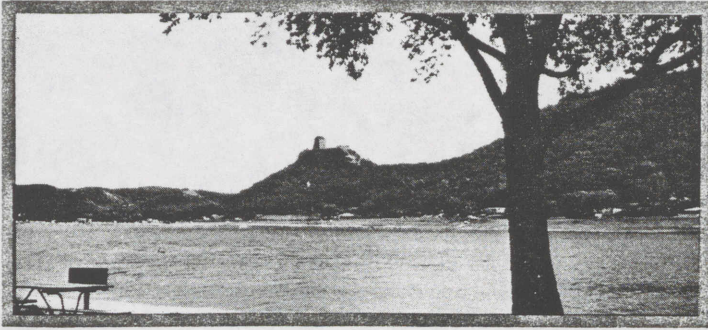
We believe our project to be environmentally sound and a resolution to an issue that is important to our citizens.

Sincerely,

Eric B. Sorensen
City Manager

EBS:df

c: Mayor and Council
Lake Winona Committee
Bob Bollant, Public Works Director



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



August 15, 1988

The Honorable Gene Pelowski
531 State Office Building
St. Paul, MN 55155

Dear Mr. Pelowski:

Previously you received an invitation to attend a meeting in Winona regarding the dredging of Lake Winona. Based upon meeting schedules, the discussion is set for 1:00 p.m. on Tuesday, September 6, 1988, at City Hall.

We appreciate you or your staff's participation in this matter with various State of Minnesota and federal agencies. With your help we intend to have a dredging project that meets environmental concerns.

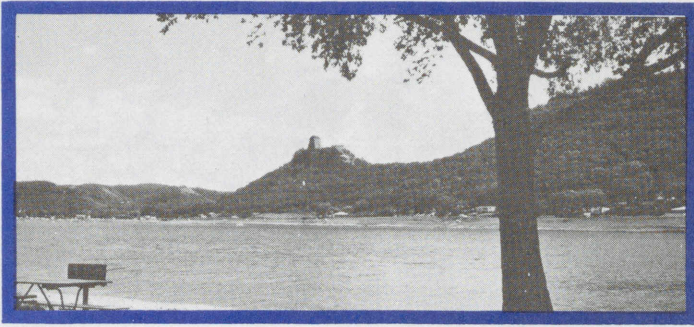
We believe our project to be environmentally sound and a resolution to an issue that is important to our citizens.

Sincerely,

Eric B. Sorensen
City Manager

EBS:df

c: Mayor and Council
Lake Winona Committee
Bob Bollant, Public Works Director



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



May 24, 1989

Mr. Cal Fremling & Members
Lake Winona Committee
R.R. #1, Box 666
Winona, MN 55987

RE: DREDGING LAKE WINONA

The City of Winona will be hosting a public meeting, at which elected officials will be present, concerning the application for Permit (1989) for dredging of East Lake Winona. The meeting will be held at 2:00 p.m. June 16, 1989, in the City Hall Council Chambers.

Permits to the U.S. Army Corps of Engineers and Minnesota Department of Natural Resources have been applied for. Public Notice has gone out.

The Project involves dredging 950,000 cubic yards of sand out of 24 acres of Lake Winona to fill 81 acres in Riverbend Industrial Park. An additional 110 acres of the easterly area of the lake would be dredged to a depth of 16 feet and approximately 392,000 cubic yards of muck would be placed on top of the 81 acre area of sand fill to a depth of 3 feet. The remaining 558,000 cubic yards of dredged muck from the 110 acre area of the lake would be placed in the 24 acre area.

We invite you to attend and request that your agency be represented.

Thank you.

Sincerely,

Robert J. Bollant
Director of Public Works

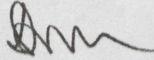
bh

This letter also sent to: Jim Haertel, William Goetz,
Refuge Manager U.S. Fish & Wildlife Service
Cal Fremling, Don Abrams, Eric Sorensen,
City Manager

**Winona State University
College of Science and Engineering
Office of the Dean**

To: Steven Berg

Fr: Dennis N. Nielsen

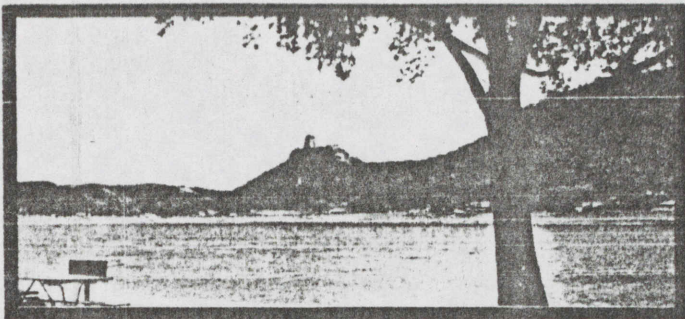


Subject: Release Time - Cal Fremling

Date: January 21, 1990

=====

The President has approved the City of Winona's request to use the services of Dr. Fremling, Spring Quarter 1990. Please work out the details with Cal. Thanks.



CITY OF WINONA

CITY HALL
207 LAFAYETTE ST.
POST OFFICE BOX 378
WINONA, MN. 55987
PH: (507) 452-8550



January 3, 1990

Dr. Darrell W. Krueger
President
Winona State University
Winona, MN 55987

Dear Dr. Krueger:

A goal of the City of Winona is to dredge Lake Winona to further enhance the beauty of Lake Winona, a tremendous asset to the City. It has been the goal of the Lake Winona Committee for a number of years to dredge the Lake.

The City of Winona has applied for permits to dredge the Lake. In the process of doing so, the City has been informed that a mitigation plan must be prepared.

The City of Winona herein requests the services of Dr. Cal Fremling to work with the Director of Public Works in preparing a mitigation plan for dredging Lake Winona. Enclosed is a copy of a resolution passed by the City Council at its regular meeting on January 2, 1990, requesting the services of Dr. Fremling.

We thank you for your assistance and we appreciate the ability of the City of Winona and Winona State University to work together on such a worthwhile project.

Sincerely,

Eric B. Sorensen
City Manager

EBŞ:df

c: Robert J. Bollant, Dir. of Public Works
Dr. Cal Fremling, WSU

APPROVED:

Darrell Krueger, President
January 4, 1990

RECEIVED

JAN 4 1990

PRESIDENT'S OFFICE
WINONA STATE UNIVERSITY

90-2

RESOLUTION

WHEREAS, the City Council has adopted a goal of dredging Lake Winona, and
WHEREAS, the City Council has directed City Administration to obtain permits
to dredge Lake Winona and fill Riverbend Industrial Park, and

WHEREAS, City Administration has applied for Permits to dredge Lake
Winona and fill Riverbend Industrial Park, and

WHEREAS, the Corps of Engineers has informed City Administration that a
Mitigation Plan will be required as part of the permit process, and

WHEREAS, the Corps of Engineers has offered direction in preparing a
Mitigation Plan through "Waterways Experimental Station" and

WHEREAS, Professor Cal Fremling of Winona State University has the
environmental expertise needed to prepare this Mitigation Plan, and

WHEREAS, Winona State University has indicated that Professor Cal
Fremling could be available to assist the City of Winona in preparation of
a Mitigation Plan.

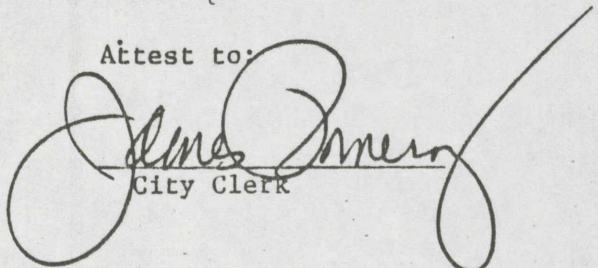
NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Winona,
Minnesota, that it should and hereby does request Winona State University to
provide time for Professor Cal Fremling to assist City Administration in the
preparation of this Mitigation Plan.

BE IT FURTHER RESOLVED that the City Manager is hereby authorized and
directed to request this assistance of Professor Cal Fremling through Winona
State University President Darrell W. Krueger.

Passed this 2nd day of January, 1990.


Mayor

Attest to:


City Clerk

